Electronic Version
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[ELECTROMIGRATION CHECK OF SIGNAL NETS USING NET CAPACITANCE TO EVALUATE THERMAL CHARACTERISTICS]

Abstract

A method for performing an electromigration check and detecting EM problems in a device or circuit. The method uses the capacitance and resistance of the conductors of the device or circuit as parameters in determining a power limit that maintains a required temperature environment that ensures the reliability of the device or circuit. The parameters of resistance and capacitance can be determined for the device or circuit through the use of commercially available device data or simulation and analysis tools. The power limit is then used to check each device interconnect to identify the location of potential EM problems. Corrective action is taken to avoid EM problems as they are detected in the device or circuit.